

Claims:

1. An electrical contact device comprising:

at least one linear insulating member; and

a plurality of electrical leads mounted in and spaced along said member and
5 extending from opposite sides of said member, said member providing support
for said electrical leads.

2. An electrical contact device as in claim 1, wherein two linear insulating
members are provided, said linear insulating members being interconnected,
each of said linear insulating members having a respective plurality of electrical
10 leads mounted in and spaced there along, the electrical leads for each member
extending from opposite sides of said member and each member providing
support for its respective plurality of electrical leads.

3. An electrical contact device as in claim 2, wherein said two linear insulating
members are integrally interconnected by the same insulating material which
15 forms said insulating members.

4. An electrical contact device as in claim 3, wherein said insulating members
and the insulating material interconnection are all co-planar.

5. An electrical contact device as in claim 1, wherein said electrical leads have a
first portion which extends from one side of said insulating member and a
20 second portion which extends from the opposite side of said insulating member,
said first portion being longer than said second portion.

6. An electrical contact device as in claim 1, wherein said electrical leads have
a first portion which extends from one side of said insulating member and a
second portion which extends from the opposite side of said insulating member,

said first portion being bent into a different configuration than said second portion.

5 7. An electrical contact device as in claim 1 further comprising an insulating frame which is integral with said insulating member for supporting said insulating member.

8. An electrical contact device as in claim 7, wherein said insulating frame and member are co-planar.

10 9. An electrical contact device as in claim 1, wherein the separation between said electrical leads on one side of said insulating member is different from the separation between said electrical leads on the other side of said insulating member.

10. An electrical contact device as in claim 1, wherein the electrical leads extending from one side of said insulating member have a c-shaped curve.

15 11. An electrical contact device as in claim 1, wherein the electrical leads extending from one side of said insulating member have a bend at substantially 90 degrees.

12. An electrical contact device as in claim 1, wherein the electrical leads extending from one side of said insulating member have at least two bends therein.

20 13. A pre-assembly for making an electrical contact device, said pre-assembly comprising:

a conducting frame including a conductive bridging member connected to opposite sides of said frame, said bridge member including a plurality of slots spaced therealong;

a plurality of leads extending from opposite sides of said conductive bridges member and spaced along said bridging member, the leads on one side of said bridging member respectively connecting with the leads on an opposite side of said bridging member across a respective conductive part of said bridging member; and,

said frame, bridging member and plurality of leads being integrally formed.

10 14. A pre-assembly as in claim 13 further comprising an insulating member which extends at least in part along said bridge member and which encapsulates a portion of said bridge member.

15. A pre-assembly as in claim 14, wherein said insulating member forms a frame around the leads extending from said bridge member.

15 16. The pre-assembly of claim 15, wherein the bridge member includes a plurality of connecting strips, the plurality of connecting strips cooperating with the plurality of electrical leads to define a plurality of slots.

17. The pre-assembly of claim 16 wherein the insulating frame includes insulating material disposed in the plurality of slots.

20 18. The pre-assembly of claim 17 wherein the plurality of connecting strips are outside the insulating frame, a portion of each of the plurality of connecting strips outside the insulating frame being removable.

19. The pre-assembly of claim 15 wherein the insulating frame surrounds a portion of each electrical lead but not the connecting strip.

20. A pre-assembly for use in making an electrical device, the pre-assembly comprising:

a plurality of electrical leads; and

a pair of connecting strips holding the leads in parallel, spaced apart relation,
the plurality of leads and the pair of connecting strips cooperating to define a
plurality of slots.

21. The pre-assembly of claim 20, further comprising a frame attached to the pair of connecting strips and surrounding the plurality of electrical leads.

22. The pre-assembly of claim 8 wherein the frame includes an outer frame and an inner frame connected to each other by a plurality of frame connectors, the inner frame, outer frame and frame connectors cooperating to define a plurality of frame slots for receiving an insulating frame.

23. A pre-assembly for an electrical contact device, the pre-assembly comprising:

a first conducting bar, the bar including a plurality of fine pitch electrical leads disposed in parallel spaced-apart relation and a connecting strip for interconnecting the leads;

a conducting frame connected to the conducting bar; and

an insulating frame connected to the conducting frame and the conducting bar.

24. The pre-assembly of claim 23, wherein the conducting bar includes a first plurality of slots and the conducting frame includes a second plurality of slots.

25. The pre-assembly of claim 23, wherein the conducting frame surrounds the plurality of leads.

26. The pre-assembly of claim 23 further including a second conducting bar, the conducting frame retaining the first and second conducting bars in spaced-apart relation.

27. A method of making an electrical contact device comprising the steps of:

5 providing a plurality of spaced apart electrical leads held in position relative to each other by at least one connecting strip, the at least one connecting strip extending between adjacent leads;

 providing insulating material along and covering a longitudinal length of said at least one connecting strip; and,

10 removing portions of at least one connecting strip not covered with said insulating material from between adjacent leads.

28. The method of claim 27 wherein the removing step includes the step of electrically isolating each of the electrical leads.